

REMARKS:

This reply encompasses a bona fide attempt to overcome the objections and rejections raised by the Examiner and presents the reasons why the applicant believes that the claimed invention is novel and unobvious over the closest prior art of record and that the present application is now in a condition for allowance.

Claims Status

Claims **1-24** were presented for examination. Claims **1-10** and **16-24** were rejected. Claims **11-15** were objected to as being dependent upon a rejected base claim, but have been indicated as allowable. Applicant thanks the examiner for pointing out the allowable subject matter.

Claims **10** and **11** are cancelled and their limitations are introduced into the amendment to claim **1**. Claims **12-15** are amended to depend from claim **1**. Independent claim **18** and dependent claim **17** are amended. New independent claim **25** is presented. As of this amendment, claims **1-9** and **12-25** are pending.

Detailed Response

In the most recent Action, the Examiner indicated that claim **11** is directed to allowable subject matter. Applicant amends claim **1** to include the limitations of claim **11** and intervening claim **10**. Accordingly, claim **1** and all dependent claims **2-9** and **12-17** are now in a state for allowance.

Regarding claim **18**, in the Action the Examiner rejected this claim under 35 USC 103(a) as being unpatentable over Kawasaki et al. (US Pat. No. 6,101,239) in view of Sliski et al. (US Pat. No. 5,369,679). The Applicant amends claim **18** to overcome this rejection. Kawasaki discloses an apparatus and related method for combining magnetic resonance imaging (MRI) and x-ray radiography. Kawasaki does not teach any beam steering technique for overcoming the problems associated with the interference of the static magnetic field of the MRI system with the electron beam in the x-ray source. Sliski, however, teaches various types of electron beam steering (cols. 10–11) in a medical device used for exposing a patient to x-rays. However, Sliski explicitly teaches (col. 10, ln. 45–49) that the purpose of this beam steering is to control the emission characteristics by directing the electron beam to different parts of the target. Sliski does not teach or suggest beam steering to compensate for the presence of an external magnetic field. In fact, Sliski explicitly teaches the use of magnetic shielding to prevent external magnetic fields from deflecting the electron beam (col. 9, ln. 1–9). Thus, one of ordinary skill in the art would not be motivated to use the beam steering of Sliski with the device of Kawasaki to compensate for an external magnetic field. One would only be motivated to use conventional magnetic shielding.

In order to make clear and explicit these important distinctions between the teachings of the prior art and the invention, claim **18** is amended to recite steering the electron beam toward a focal spot on said anode target to reduce the deflection of the electron beam by the static magnetic field of the MRI device. As clearly explained above, the combination

of Kawasaki and Sliski does not teach or suggest this claimed technique of reducing the deflection of the electron beam of an x-ray source through the use of beam steering. Accordingly, claims **18–24** are submitted as patentable. Moreover, regarding new claim **25**, it includes the limitation of an electron beam deflector that reduces a deflection of said electron beam by the static magnetic field of the MRI system. Therefore, it is submitted as patentable for similar reasons as presented above for claim **18**.

Regarding the other references of record, the Applicant notes that none teaches steering an electron beam of an x-ray source to reduce a deflection of the electron beam by a static magnetic field of an MRI system.

The Examiner is sincerely invited to telephone the undersigned for discussing an Examiner's Amendment or any suggested actions for accelerating prosecution and moving the present application to allowance.

Respectfully submitted,

LUMEN I.P. SERVICES
2345 Yale Street, Palo Alto, CA 94306
(650) 424-0100

BY



Thomas J. McFarlane

Reg. No 39,299